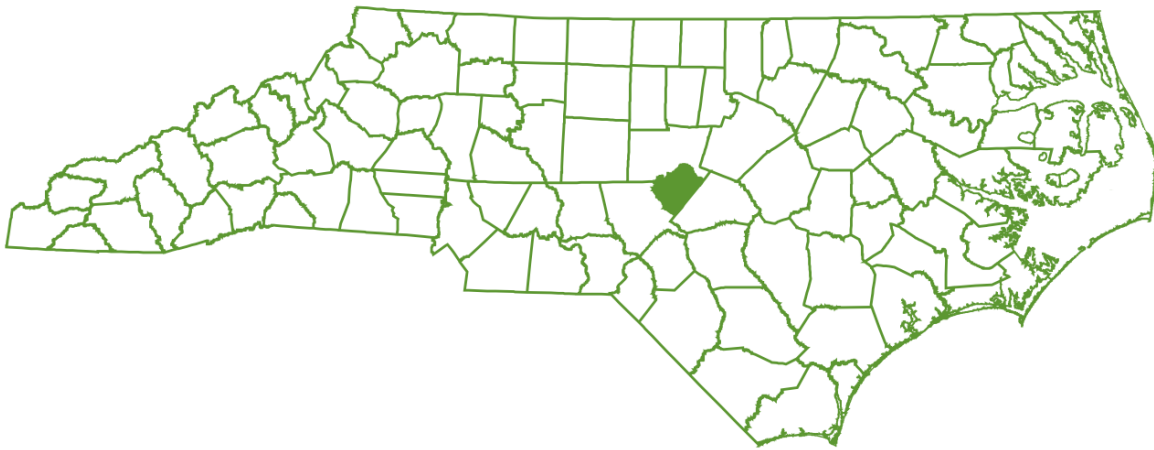


Lee County North Carolina

Cost of Community Services Study



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Edward Olive completed the research for the Lee County, North Carolina Cost of Community Services (COCS) Study. Mr. Olive serves as Associate Director of the Lois G. Britt Agribusiness Center at the University of Mount Olive. He received his Bachelor of Science degree in AgriScience Education from the University of Mount Olive and a Master of Business Administration with a concentration in Marketing from Regent University. Dr. Sandy Maddox reviewed and edited the study. Dr. Maddox serves as Director of the Lois G. Britt Agribusiness Center and has worked in agriculture for 40 years. An additional contributor for the study was Dr. Kathy Best. Dr. Best is a Certified Public Accountant and Dean of the Tillman School of Business at the University of Mount Olive. Dr. Best's COCS model was utilized as a template for the creation of this study. Dr. Best is also the author of the Cost of Community Services Studies for Wayne and Craven counties.

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Mary C. Yow, PPS, Lee County Tax Administrator
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Executive Summary

Review of county government expenditures and revenue collections with respect to land use may be useful as local officials evaluate economic development and county planning opportunities. A Cost of Community Services (COCS) Study can provide county leaders with a better understanding of the net gain or loss for various land use categories.

The use of Cost of Community Services Studies to give a snapshot of county or municipality revenue-to-expenditure ratio was initiated by the American Farmland Trust (AFT). The AFT realized that land, nationwide, was being converted from agricultural uses to non-farm uses at a rate of 50 acres per hour¹. North Carolina alone lost nearly 9,000 farms and over 1 million acres of agricultural land to other uses over the past 15 years². Lee County's location in the Piedmont of central North Carolina provides the potential to increase land values and competition for land for non-agricultural uses – especially given the proximity to Raleigh, Greensboro and other areas with much growth. A Cost of Community Services Study can serve as a valuable tool to plan for growth and to define a balance between open lands and development.

The Lee County Cost of Community Services Study was conducted using the expenditure and revenue data for each department from the fiscal year 2015-16 Comprehensive Annual Financial Report provided by the Lee County Manager's Office. To accurately determine expenditure and revenue data, respective department directors or designated representatives were asked to provide a percentage breakdown of fiscal resources devoted to providing necessary community services to three land use groups. The percentage of county revenues derived from each land use was also determined.

¹ American Farmland Trust, <https://www.farmland.org/our-work/areas-of-focus/farmland>

² USDA Census of Agriculture, State Data (1997, 2002, 2007, 2012), http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_1_State_Level/North_Carolina/st37_1_001_001.pdf

Land use designations evaluated were 1) residential, 2) commercial/industrial, and 3) agricultural/forestry.³

This Lee County COCS study demonstrates the following outcomes for the fiscal year 2015-16:

- ***For each \$1 of county revenue contributed by residential uses, the county spent \$1.32 to provide necessary community services for those residential land owners.***
- ***For each \$1 of county revenue derived from commercial uses, Lee County spent \$0.47 for county-provided services.***
- ***For each \$1 of income received by Lee County for agricultural/forestry uses, the county spent \$0.31 to provide required community services.***

Residential land uses created a net loss of \$13,670,786.05 while the other two land use categories generated surpluses of: \$10,661,615.05 from commercial and \$3,766,629.00 from farmland (Table 1).

The ratios generated from expenditure/revenue data for all land uses in Lee County are similar to other Cost of Community Services Studies in North Carolina and across the country. These ratios show that agricultural properties provide the highest net gain with every dollar of revenue only requiring 31 cents in services to agricultural properties. In most counties, commercial/industrial land uses provide the highest net gain but there are other NC studies that have shown agricultural with the highest net gain as in Lee.

³ The land category designations are the following:

- Working and open lands includes farms, forests and open space.
- Commercial and Industrial are combined and includes firms.
- Residential development includes all housing, including rentals.

Note also that in the event there was evidence of a migrant agricultural work force, temporary housing for these workers was considered part of agricultural land use. Additionally, the farm business has been separated from the farm residence, with the property value of farm residences assessed in the same manner as any other residences. Therefore farm residences would be included in the residential land use category.

Commercial land follows with 47 cents on the dollar and residential lands are actually a net loss to the county as residential land use requires \$1.32 in services for every dollar of revenue they bring to Lee County (Appendix Table 3). The gain realized in commercial and agricultural properties help to cover the residential deficit. This is common with Cost of Community Services Studies – most of the services provided by counties are aimed at benefitting residents.

Table 1. Lee County Cost of Community Services Study Findings				
Lee County	FY 2015-16 Actual	Residential	Commercial	Farmland
Total Revenues	\$68,118,929.00	\$42,602,584.20	\$20,093,897.40	\$5,422,447.40
Total Expenditures	\$67,361,471.00	\$56,273,370.25	\$9,432,282.35	\$1,655,818.40
Net contribution	\$757,458	(\$13,670,786.05)	\$10,661,615.05	\$3,766,629
Land use ratio*– Expenses/Revenue		\$1: \$1.32	\$1: \$0.47	\$1: \$0.31

*The cost of services provided for each \$1 of revenue.

Lee County had an estimated population of 59,616 residents in July 2016 according to the US Census Bureau (ranking 48th out of 100 counties in population density). This is recognized as a 3% increase in population from the 2010 US Census (57,866)⁴. Both populations are increased from 49,040 in 2000. Lee County, had a tax rate of \$0.795 in 2015 and 2016.

⁴ U.S. Census Bureau, 2010 Census, North Carolina County Population

Lee County invests more in community services to land uses associated with commercial and industrial (14%) than agricultural/forestry ventures (2.46%). These two land uses still have a combined total of expenditures of less than 20% (16.46%) of the county's total expenditures for community services. In summary, Lee County expends a much lesser amount to provide services to agricultural and commercial land uses as compared with residential. The combined revenue from agricultural and commercial/industrial land uses are important to maintaining the fiscal stability of the county.

Studies have revealed when a rural community with a large base of farm and forestland begins to convert that land into residential development, either as a planned growth strategy or due to market forces and a lack of growth control measures, the local government is virtually guaranteed to head down a path of deteriorating financial stability and increasing local property tax rates⁵. Differential property tax programs are justified as a way to provide an incentive to keep land open and in active agricultural use. Even with the present-use value taxes, agricultural properties contribute a surplus of revenue that contributes to public services for Lee County residents.⁶

The COCS provides an accurate depiction of Lee County revenue and also evaluates the expenditures of county resources provided for the different land uses identified. The goal of this study is to provide an additional resource for county leaders to use to understand not only the cost of resources expended on each land use, but to continue to understand and support the agricultural industry in the respective counties and to North Carolina. This study makes a significant statement: It is financially wise to keep land in agricultural production. As a result, this effort may become an economic development focus for the

⁵ Dorfman, Jeffrey H. "The Fiscal Impacts of Land Uses on Local Government" Land Use Studies Initiative and Department of Agricultural & Applied Economics The University of Georgia, April 2006

⁶ Present-Use Value, or PUV, is a program established by N.C.G.S. §§ 105—277.2 to .7 and administered by the county tax assessor through which qualifying property can be assessed, for property tax purposes, based on its use as agricultural, horticultural or forest land. The present-use value is the value of the land based solely on its ability to produce income. Qualifying property is assessed at its present-use value rather than its market value. The tax office also maintains a market value for the land. The difference between the market value and the present-use value is maintained in the tax records as deferred taxes. When land becomes disqualified from the program, the deferred taxes for the current and three previous years with interest will usually become payable and due.

County and others who are concerned about the sustainability of farmland within North Carolina. In addition to helping maintain fiscal balance, farmlands help sustain Lee County's economy, contribute to economic diversity and rural character, and help shape the overall quality of life in the region.

Introduction

The *Lee County Working Lands Protection Plan*, written by Dr. Stan Dixon and Ms. Kim Caroselli, revealed that Lee County non-farm residents believed that Lee County agriculture has a positive impact on the quality of life in the county and supported local government taking action to protect and preserve agriculture in Lee County. Among other outcomes, the plan provided 8 recommendations and action steps that Lee County officials should take in an effort to support agriculture in the county. Three of the recommendations related directly to this Cost of Community Services Study and are listed below.

1. Actively work to engage citizens, local government and organizations in preserving, supporting and promoting farming, forestry and agribusiness in Lee County.
2. Increase efforts to educate farmers, landowners and non-farm residents on the available farmland preservation tools.
3. County agriculture agencies working with the Lee County VAD Agriculture Advisory Board should pursue programs and policies that encourage the protection of working lands.⁷

As noted in the plan, Lee County agriculture and the military are two significant economic drivers for the county for a variety of reasons. Numerous strengths exist within the county to support agriculture and agribusiness including prime soil and water resources; diversity of the agriculture industry including forestry, crops and livestock; public sector support for agriculture; access to major transportation corridors; low development pressure; and market accessibility for agricultural products. By preserving farmland and other open spaces in Lee County, not only is agricultural production protected, but the economic viability of rural communities within the county is ensured. The military enjoys a symbiotic relationship with agriculture in North Carolina. With Lee County's proximity to Fort Bragg and other military installations, it is in the best interest of the military to maintain open lands.

⁷ Caroselli, Kim and W. Stan Dixon. Lee County Working Lands Protection Plan.
<http://umoag.com/outreach/docs/Lee%20County%20Working%20Lands%20Protection%20Plan%20Formatted.pdf>

The military presence in eastern North Carolina is in part due to agricultural and open lands that exist and are compatible with the training needs of numerous military installations. Privately-owned agricultural, forest, and open-space lands are essential to the military mission. Though Lee County is not near as many military installations as other counties that have completed Cost of Community Services Studies in eastern North Carolina – the county is still important to the state’s success in agriculture and the military mission.

On July 12, 2016 the North Carolina Department of Agriculture and Consumer Services announced the delineation of a 33-county region as the Eastern North Carolina Sentinel Landscape (Figure 1). The goal of this federal-state-local, public-private partnership is to create incentives which assist qualifying private landowners and communities to preserve specific military mission-critical areas and take action to help sustain military readiness, through the protection and preservation of working lands, and natural resources⁸.

Lee County falls just outside of the 33-county region, but the county’s proximity to several training routes and grounds can be noted in Figure 1. Though Lee County will not qualify for incentives included in the Sentinel Landscapes project, it is likely that Lee County can partner with neighboring counties and can continue to support the military mission.

⁸ USDA, US Dept. of Interior, US Dept. of Defense, Sentinel Landscapes (2016) <http://sentinellandscapes.org/>

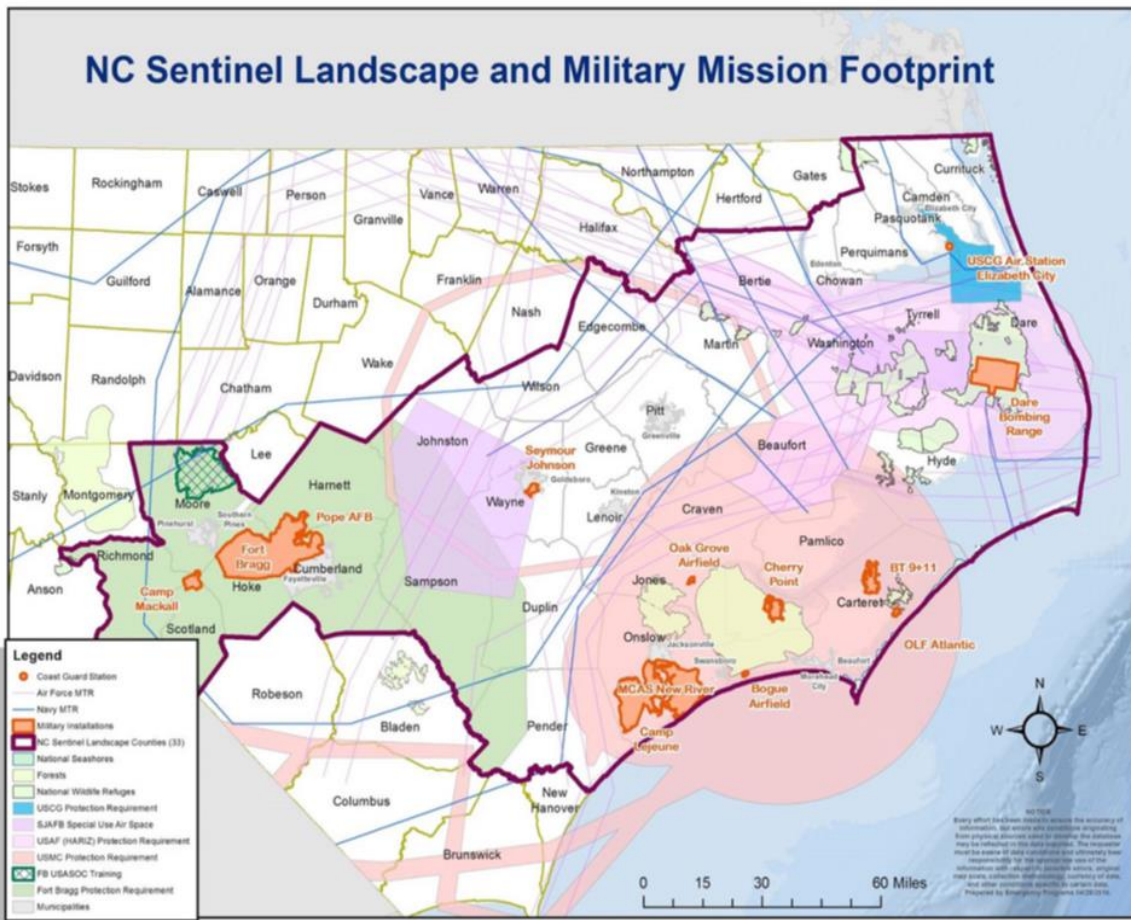


Figure 1. Eastern North Carolina Sentinel Landscape and Military Mission Footprint

When agricultural or other open lands are converted to development or sites for cell towers, or high-intensity lighting, military training opportunities are put in jeopardy. The Eastern North Carolina Sentinel Landscape has recognized rural counties and agricultural lands as an essential asset to military training in eastern North Carolina. The retention of working lands within this 33 county area and in counties like Lee County that border training and flight paths is important and allows for the two largest industries in the state to complement one another. Both agriculture and the military have an impact on the economy and quality of life in Lee County.

The Lee County Cost of Community Services Study demonstrates that the provision of community services for agriculture and forestry results in a net gain to the county with regard to the reported tax base. Data indicates that of the three land uses investigated,

agricultural/forestry provides the highest rate of return, with commercial/industrial land uses falling just behind agricultural/forestry land uses. As economic development is pursued, agricultural lands and uses should be supported and encouraged to the same extent or more so than commercial and industrial uses are commonly pursued and encouraged.

Most communities fail to realize that saving land saves money. While residents demand expensive public services and infrastructure, privately-owned working lands enhance community character and quality of life without requiring significant public expenditures. Their fiscal contributions typically are overlooked, but like other commercial and industrial land uses, agricultural (farm, ranch and forest) lands generate surplus revenues that play an essential role in balancing community budgets. This, perhaps, is the most important lesson learned from Cost of Community Services (COCS) Studies.⁹

Numerous COCS Studies have been completed by a variety of researchers around the country for cities and rural communities. The maximum, median, and minimum ratios of local government revenues-to-expenditures collected from these studies are shown in Table 4A of the Appendix. The median ratio of national studies states that for every dollar the county generates from the residential category, it spends \$1.16 in services. The commercial/industrial and farm/forestland categories show that, on average, the government receives more than it spends and therefore, these land uses create a surplus. These numbers show the fallacy of depending on residential development as the road to a sound growth policy. Residential development to date has generated sufficient revenue to cover its associated expenditures in only one instance in various NC county studies or other county studies across the nation. The minimum reported ratio for national studies conducted and reported by the American Farmland Trust was 1:\$1.01. The COCS Study completed in 2015 for Pamlico County located in the coastal region of NC and with a population of 13,000 persons reported a ratio of 1:\$0.99 indicating that residential properties were at the breakeven point and was below the last reported minimum. The rural nature of the county, the lack of development pressure and

⁹ Best, Wayne County Cost of Community Services Study (2011)

minimal investments in community services by the county was ascertained to be the reason for this balance in revenue and expenditures for residential properties.

American Farmland Trust developed this low-cost fiscal analysis to contribute local knowledge to decisions about land use. The purpose of this research is not to suggest any prescriptive course of action. By using statistics and financial land use and economic data specific to Lee County, this COCS Study can help move public dialogue from emotion to analysis and from speculation to projection. It provides reliable financial data, allowing officials to make informed planning decisions and evaluate strategies that will maintain a balance in the distribution of future land uses¹⁰.

¹⁰ Best, Wayne County Cost of Community Services Study (2011)

Cost of Community Services Studies¹¹

A Cost of Community Services (COCS) Study is a case study approach used to determine an individual community's public service costs versus revenues based on current land use, specifically residential, commercial/industrial, and farm/forest. Publicly available financial reports (Audited Financial Statements or the Comprehensive Annual Financial Report (CAFR)), departmental records and budgets, and assessor's data are used to allocate revenues and expenditures to determine the financial effects of the various land uses. COCS Studies are based on real numbers, making them different from traditional fiscal impact analysis, which is predictive and speculative. They show what services taxpayers receive from their local government and how local government revenues and expenditures relate to land use.

American Farmland Trust (AFT) first became interested in COCS Studies and growth-related issues in the 1980s because agricultural lands were converted *more commonly* to development than any other type of land. Farmland is desirable for building because it tends to be flat, well drained and has few physical limitations for development. It is also more affordable to developers than to farmers and ranchers. COCS Studies were originally used to investigate three commonly held claims:

1. Open lands—including working agricultural and forest lands—are an interim land use that should be developed to their “highest and best use”;
2. Agricultural land gets an “unfair” tax break when it is assessed at its actual use value for farming or ranching instead of at its potential use value for development;
3. Residential development will lower property taxes by increasing the tax base.

¹¹ Freedgood, Cost of Community Services Studies: Making the Case for Conservation, American Farmland Trust, 2002.

In response to these claims, it is of particular relevance to consider the fiscal contributions of privately-owned natural resource lands in areas, such as Lee County, where farming and forestry are important industries. Both commercial and agricultural lands generate less revenue than residential properties in Lee County contributing 14.45% and 10.93% respectively. While governmental expenditures for services are slightly higher for agricultural land uses (4.82%) than commercial land uses (4.64%), working lands still require little public expenditure in comparison due to their modest demands for infrastructure and public services. While it is true that an acre of land with a new house generates more total revenue than an acre of farmland, this information provides little insight into a community's fiscal balance. As a result, COCS studies are used to determine the *net* fiscal impact of land uses in the present by comparing total revenues to total expenditures to ascertain the overall contribution of different land uses.

COCS Studies are conducted for a variety of other reasons, such as supporting existing land protection programs or developing new ones. Some communities are interested in raising awareness about the benefits of protecting natural resources, while others may have broader planning goals. Other primary reasons for COCS Studies are: to compare the impacts of different land uses, to direct new development toward existing infrastructure, or to supplement a comprehensive planning process. *Above all, COCS Studies are most valuable to communities that are concerned about farm and other open lands.*

COCS Studies are best used in communities similar to Lee County that rely heavily on property taxes to generate revenues. It is important to recognize that COCS Studies are fiscal, not economic analyses and therefore do not examine direct economic benefits or secondary impacts of a given land use to the local or regional economy. COCS Studies are not intended to judge the value of one land use over another or compare one type of new development to another. *The particular niche of a COCS Study is to identify existing land use relationships and evaluate the contribution of agricultural and other open lands on equal ground with developed land uses.* Note, the

data provided in COCS studies are “snapshots in time,” and as such are neither predictive nor speculative.

Table 2 classifies categories of information that a Cost of Community Services Study can provide and what their ultimate utility can illustrate to local governmental officials.

Table 2. Uses of Cost of Community Services Studies	
COCS Studies Do:	COCS Studies Do Not:
<ul style="list-style-type: none"> ○ Provide a baseline of information to help local officials and citizens make informed land use decisions. ○ Offer the benefit of hindsight to see the effect of development patterns to date. ○ Demonstrate the relative fiscal importance of privately owned land in agricultural, forest or other open space uses. ○ Make similar assumptions about apportioning costs to agricultural land as to commercial/industrial land. ○ Have a straightforward methodology and easy-to-understand findings. 	<ul style="list-style-type: none"> ○ Project future costs of services incurred by new development. ○ Determine the direct or indirect value of a particular land use to the local or regional economy. ○ Quantify the non-market costs and benefits that occur when agricultural land is converted to urban uses. ○ Judge the intrinsic value of any particular land use. ○ Compare the costs of different types of residential development. ○ Treat agricultural and other working lands as residential development.

Source: Freedgood, Julia. Cost of Community Services Studies: Making the Case for Conservation. American Farmland Trust. 2002.

Methodology

The following standard land use definitions are adapted to individual COCS Studies.

- **Agricultural development** (Farm, Forest and Open Land) – All privately-owned land and buildings associated with agricultural and forestry industries, including temporary housing for seasonal workers who are not permanent residents.
- **Residential development** – All single-and multi-family residences and apartment buildings, including farmhouses, residences attached to other kinds of businesses and rental units; all town-owned property used for active recreation or social functions for local residents.
- **Commercial and Industrial Development**¹²– All privately-owned buildings and land associated with business purposes, the manufacturing of goods or the provision of services, excluding agricultural and forestry industries, and utilities.

There are three basic steps in the process of conducting a COCS Study:

1. Collect data: Obtain relevant reports and other financial records, interview officials, boards and departments.
2. Allocate revenues and expenditures by land use.
3. Analyze data and calculate revenue-to-expenditure ratios for each land use category.

The COCS revenue-to-expenditure ratio compares how many dollars' worth of local government services are demanded for each dollar collected. A ratio greater than 1.00 suggests that for every dollar of revenue collected from a given category of land, more than one dollar is spent. Conversely, an expenditure ratio less than 1.00 indicates that

¹² For simplicity, the term "commercial" will denote both industrial and commercial land uses for the remainder of this study. Likewise, "agricultural" will refer to farm and forest land uses.

for a given category of land, demand for publicly-financed services is less than that sector's contribution to the local budget.

Most studies show that the COCS ratio is substantially above 1 for residential land while ratios for the other two land use categories are usually substantially below 1. Lee County financial records revealed that the COCS ratio for all land uses followed this trend with residential land uses above 1 and agricultural and commercial/industrial below 1.

COCS Method for Lee County

The Lee County Cost of Community Services Study is based on fiscal data from the 2015-2016 budget year. The reported actual expenditures for Lee County for the fiscal year that ended on June 30, 2016 was \$67,361,471 for the six departmental categories and the debt service and other financing sources classifications. A breakdown of the expenditures revealed that 83.54 percent of expenditures were to provide services to residential land uses, 14 percent were to provide services to commercial/industrial land uses and 2.46 percent were attributed to agricultural and forestry land uses.

Actual county revenues received from taxes, licenses, and other fees, services, and investments, during this same fiscal period were reported as \$68,118,929. Of this total, 62.54 percent was generated from residential property taxes and additional fees, 29.5 percent was generated by commercial/industrial land use, and 7.96 percent resulted from agricultural and forestry use. The county tax office and county manager's office provided data specific to county revenues and expenditures for each county department and the distribution of funds and services that were devoted to each land use: 1) Residential, 2) Commercial/Industrial, and 3) Agricultural/Forestland.

The Comprehensive Annual Financial Report (CAFR) for Lee County compiled by the Lee County Finance Department led by Lisa Minter, Finance Director. Additional guidance and support was provided by the county's independent auditor Thompson, Price, Scott, Adams & Co., P.A. The CAFR was used to derive the actual revenues and expenditures for the fiscal year ending June 30, 2016. Revenues and expenditures were allocated among the three defined land uses based on data provided by the county finance office. Data obtained was entered into a spreadsheet to derive the total amount of funds allocated by each department to each land use.

Categories included in Lee County's revenues were:

- Property Taxes
- Local option sales taxes

- Other Taxes and Licenses
- Unrestricted Intergovernmental
- Restricted Intergovernmental
- Permits and Fees
- Sales and Services
- Investment Earnings
- Miscellaneous

Real property taxes were collected for the general fund at a rate of \$0.795 (79.5 cents) per \$100 of property value in 2015-2016.

Expenditures for the County came from the eight fund services: general government, public safety, economic and physical development, human services, education and cultural & recreational. The largest county fund was education with expenditures of \$21.37 million.

Expenditures were allocated in one of two ways. For services that exclusively benefited households (as opposed to commercial establishments)—for example, public schools—100% of expenditures were allocated to the residential sector. For departments whose activities benefited both businesses (including agricultural businesses) and residences, expenditures were allocated based on the proportion of total value accounted for by each land use category.

If it was difficult to derive a direct percentage or distribution of the services devoted to a particular land use, a default percentage was determined based on the assessed property valuations for 2015-2016 fiscal year for each land use. The information collected from the Lee County Tax Office is shown below. This default breakdown is as follows:

- 60% Residential (including Historic Property)
- 35% Commercial/Industrial
- 5% Agricultural (PUV)

Findings

Supporting information for the findings expressed in this section can be found in the Appendix.

Appendix Table 1 shows the distribution of revenues for Lee County in the 2015-2016 fiscal year. The actual county fund revenues for 2015-2016 were \$68,118,929.00. This information was gathered from the Lee County Comprehensive Annual Financial Report General Fund- Schedule of Revenue, Expenditures and Change in Fund Balance. Ad valorem property taxes, which are taxes based on the assessed value of real estate or personal property, generated the most revenue with \$40,789,440.00, or almost 60% of the county's total revenue. Local option sales tax at \$12.2 million accounted for almost 18 percent of revenue collected. Restricted intergovernmental revenues totaled \$10,153,600 which made up 14.91% of the total. Revenue from sales and services made up 4.1% of county government income at \$2,790,962.00. Unrestricted intergovernmental revenues accounted for 1.17 percent of the county's total revenue for 2015-16 contributing \$798,119.00. The remaining 2 percent of revenue was distributed between other taxes and licenses bringing \$500,552 (0.74%), miscellaneous revenues making up \$422,837 (0.62%), permits and fees (0.51%) adding \$350,004, and investment earnings of \$91,540 (0.13%). Additional detail of revenues collected is found in Appendix Table 6.

Appendix Table 2 shows the distribution of actual expenditures for the fiscal year 2015-2016 for Lee County (additional detail may be found in Appendix Table 7). Lee County actual expenditures for fiscal year 2015-2016 for the 6 county departments and inclusive of debt service were \$67,361,471.00. This information was gathered from the Lee County Comprehensive Annual Financial Report General Fund- Schedule of Revenue, Expenditures and Change in Fund Balance. Education represented the largest expenditure amount at more than \$21 million, or 31.73 percent of the total county government expenditures. Human Services follows with 22.4% of the total expenditures posting slightly more than \$15 million. To provide public safety services to

county residents, nearly \$10 million or more than 14.6 percent of county expenditures were required. Debt service expenditures made up 13.31 percent of the total budget at nearly \$9 million. General government spent just over \$8.8 million, or 13.13 percent of the county departmental expenditures. Lee County Cultural and Recreational expenditures were more than \$2 million making up just over 3% of the total. Economic and Physical Development made up the lowest expenditure for the year at \$1,166,079 which was 1.73% of the expenditure total.

Appendix Table 3 provides the revenue-to-expenditure ratios that were developed through the Lee County Cost of Community Services Studies. In summary, this COCS Study found that in Lee County, 83.54 percent of county expenditures were used to provide services for residential land use compared with 14 percent for commercial and 2.46 percent for farm and forest land. These were compared with revenue percentages of 62.54% for residential, 29.5% for commercial and 7.96% for agricultural land uses. ***In Lee County for each dollar of residential revenue earned, the county spent approximately \$1.32 to provide services to those residents during 2015-2016.*** This ratio is \$0.16 higher than the median noted by the American Farmland Trust, which is \$1:\$1.16, for all studies included nationally. The ratio is similar to several studies in North Carolina including Union County (\$1.30), Orange County (\$1.32), Guilford County (\$1.35), Pitt County (\$1.29), and Iredell County (\$1.35). This revenue-to-expenditure ratio represents a net loss to the county as a result of the provision of community services to the residential property owners of Lee County. A net loss is commonly found in COCS Studies with regard to residential land use as the majority of expenditures are used to benefit and serve residents of the county. The largest departmental expenditures in Lee County provided to residential property owners were attributed to Education making up nearly one-third of the county's total expenditures.

Revenue income for both commercial/industrial and agricultural/forestry resulted in a net gain to the county when evaluating the revenue-to-expenditure ratios. These land use revenues offset the net loss realized from residential land uses. Most COCS Studies are conducted in counties which are experiencing a loss of open land as a result of an

increase in residential development or are anticipating this to occur due to developmental pressures related to population growth. Lee County's population experienced an increase of nearly 9,000 residents from 2000 to 2010 according to census numbers. This population increase and anticipated continued growth in Lee County is important for county leaders to recognize. The residential revenue-to-expenditure ratio provided in the COCS provides county leaders the ability to understand the importance of maintaining a balance in land uses as they relate to the county's fiscal stability. As residential development continues to expand in Lee County, it is expected that this ratio will increase as the volume of services and the associated costs to provide these services to residents increase. By maintaining and supporting agricultural and commercial land uses in Lee County, while embracing the residential growth, county leaders can ensure a sustainable and fiscally responsible balance between these three important land use categories.

As noted, both commercial/industrial and agricultural/forestry land uses demonstrated a net gain to the county when the revenue-to-expenditure ratio was evaluated. ***For each \$1 of revenue generated from commercial/industrial land uses, Lee County spent an estimated \$0.47 to provide services to those commercial entities.*** Agricultural lands also represented a positive ratio of return for the county's investment in agricultural and forestry related expenditures. ***For each dollar of revenue derived from agricultural and forested land, Lee County spends \$0.31 to provide necessary services for those land uses.*** These ratios are comparable with other county studies both in NC and nationwide. Typically a lower revenue-to-expenditure ratio for commercial/industrial land use exemplifies the interest of county leaders and economic developers in counties across the state and nation to encourage and provide incentives for this type of land use. In many cases, commercial/industrial revenues are lower than agricultural ratios. In the case of Lee County, agricultural ratios actually have a higher net gain than commercial and industrial uses. This is the case with other counties in North Carolina including Union, Craven and Pamlico. The net gain associated with agricultural lands, while often over looked, serves as an important

component of the necessary balance essential to the economic stability of county governments.

As noted, Appendix Tables 4A and 4B provide ratio comparisons with national Cost of Community Services Studies and NC studies. As mentioned in the Table 3 synopsis, the residential ratio calculated in the Lee County Cost of Community Services Study was slightly higher than the median from national studies and similar to many residential ratios in NC studies. Most studies show that the COCS ratio is substantially above 1 for residential land use while ratios for the other two land use categories are usually substantially below 1. In the Appendix Tables 4A&B the median “national” residential revenue-to-expenditure ratio is 1:1.16, while the median commercial and agricultural are 1:0.30 and 1:0.37, respectively. In North Carolina, nineteen counties have had Cost of Community Services Studies conducted. The median residential revenue-to-expenditure ratio for these NC studies was 1:1.23, while the median commercial and agricultural are 1:0.34 and 1:0.59, respectively. Lee County’s ratio for residential is higher (at 1:1.32) than the national and state median ratios. The agricultural land use ratio of revenue-to-expenditures in Lee County (1:0.31) is lower than median ratios nationwide and across the state.

The commercial ratio of 1:0.47 in Lee County is higher than the national and North Carolina studies medians. Multiple county departments posted expenditures for the provision of services to commercial and industrial land uses. However, fewer departments posted revenues contributing to the county revenue stream for this land use category.

The break-even home value for Lee County is provided in Appendix Table 5. The revenue and cost of service numbers that lie behind the ratios reported in this study can also be used to calculate the home value necessary for a county to break-even. If one assumes that service cost is fairly constant across houses relative to the home value, such computations are straightforward. Further, this is not an unreasonable assumption as local government service costs will vary with house location, lot size, and with

number of children, but are not particularly correlated with home value. Given this assumption, Appendix Table 5 presents an analysis which computes the residential property value needed to generate an exact balance between average revenues contributed by current housing units and the average value of public services consumed by households.

The “breakeven” house price was computed assuming that any new household would consume the average amount of services reflected in the 2015-2016 budget – i.e., that they would possess the average number of school children, consume an average amount of public health and social services, etc. The computation further assumes that any new household would contributed the average amount of non-property tax revenues generated by existing residential properties, and takes as a benchmark the current property tax rate of 79.5¢ per \$100 valuation. Based on these assumptions, the breakeven property value was computed as \$183,522.

Table 6 of the Appendix provides a listing of the actual revenues broken down by the land uses evaluated in the study. For fiscal year 2015-2016, Lee County revenues totaled \$68,118,929. The breakdown percentages were provided by the county tax office and county finance office after evaluation of departmental revenues. Table 6 accurately represents the distribution of each revenue line item and provides the percentage that is attributed to each land use. This information was compared with the expenditure information to calculate the ratio of Lee County’s revenues-to-expenditures. The default breakdown percentage for both revenues and expenditures is: Residential (including historic) 60%; Commercial/Industrial 35%; Agriculture/Forestry 5%.

Appendix Table 7 details the expenditures, totaling \$67,361,471, for the county in fiscal year 2015-2016. These expenditures are again distributed by land use with the percentages provided by county administrators. This information was used with the revenue data to calculate the ratio of county revenues-to-expenditures.

Discussion

COCS Studies provide a baseline of information to help local officials and citizens make informed land use decisions. They offer the benefit of hindsight to see the effect of development patterns to date. They also demonstrate the fiscal importance of privately owned land in farm and forest uses.

The ratios found in Lee County are comparable to national median value for the residential sector. The residential ratio of \$1 of revenue to \$1.32 expenditure is within sixteen cents of the national median of \$1.16 and six cents of the median for NC studies, \$1.23. The commercial ratio of \$1 of revenue to \$0.47 is seventeen cents higher than the national median of 30 cents and thirteen cents more than the NC median of 34 cents. Finally, the farmland ratio of \$1 to \$0.31 is 6 cents lower than the national median of \$1 to \$0.37, but is significantly less than the NC median of 59 cents (See Figure 2.).

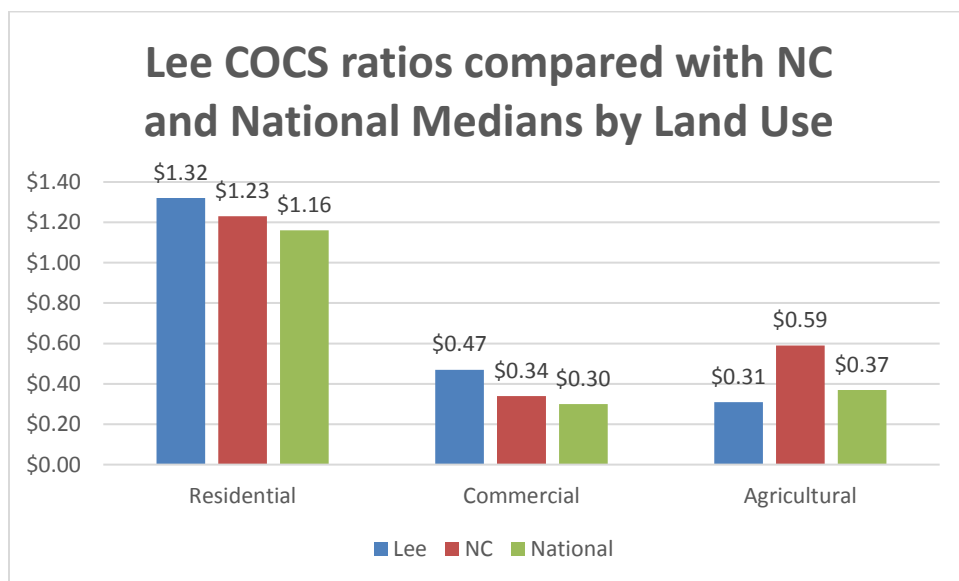


Figure 2: Lee County Cost of Community Services Study Ratios Compared to NC and National Studies (American Farmland Trust)

The purpose of a COCS study is to determine the net fiscal contribution of farm properties so these lands may be duly considered in the planning process, not to recommend one type of land use over another. Because the studies are descriptive,

they should not be used to predict the impact of a single development or to project future costs of services created by new development.

The results of this study, however, provide reliable financial information that demonstrates the importance of agricultural and forest lands to the fiscal stability of Lee County.

- In Lee County residential development contributes the largest amount of revenue, over \$42.5 million, however its net fiscal impact was negative as reflected in the 2015-2016 fiscal year data. Residential land uses created a deficit of \$13,670,786.05, while the other two land use categories generated substantial surpluses: \$10,661,615.05 from commercial and \$3,766,629.00 from agricultural.
- During the 2015-2016 fiscal year, Lee County reported a budget surplus of \$757,458. This surplus was a result of the revenue generated by both commercial/industrial and agricultural/forestry land uses. Commercial land use revenues alone would not have offset the net loss required to provide services to residents of Lee County.
- Residential, commercial and agricultural lands generated revenue from property and sales taxes and other fees with the largest surplus coming from agricultural land uses. Lee County retains more county funds from agricultural land uses than any other.
- Both commercial and agricultural lands pay more in local tax and other revenues than they receive in services, even with a reduced assessed value for agricultural lands.

As American Farmland Trust has emphasized previously, this research also suggests that development of strategies to retain this land base for future agriculture would be a good long-term investment.

- Differential property tax programs, such as present-use value, are justified as a way to provide an incentive to keep land open and in active agricultural use.
- A balance of land uses, including agricultural lands, is needed to provide adequate revenue to pay for county services.

The findings of this study show the fiscal benefits that result from agricultural lands and factual information to help residents understand the delicate fiscal balance between taxes, other community revenues and the cost of public services. In addition, this information should be useful for county leaders and residents when faced with land use decisions now and in the future.

Agriculture within Lee County is a significant contributor to the economy. 39,081 acres of farmland generate \$35.2 million in total cash receipts from the sale of agricultural products. This study makes a significant statement: It is financially wise to keep land in agricultural production. In addition to helping maintain fiscal balance, farmland helps sustain Lee County's economy, contributes to economic diversity and rural character, and helps shape the overall quality of life in the region.

Lee County's desire to engage in a Cost of Community Services Study exemplifies the interest of local leaders in the future and health of the county and provides a unique opportunity for current and future county leaders. The fact that Lee County data exhibits a net gain for both commercial/industrial and agricultural/forestry land uses is similar to other studies, but does present an opportunity for planning for the future of agriculture and anticipated residential and commercial development in the future. Study after study indicates as residential development has occurred and subsequent services are provided that residential development becomes an increased net loss to the local

government with regard to revenue/expenditure evaluations. These same studies indicate that the net gain represented by commercial and agricultural uses in all cases is enough to offset the net loss of residential development thereby fortifying the need to have a balanced land use plan. Most local leaders plan for multiple community needs including: transportation, housing, economic development and environmental protection. Data, however, exhibits most people want farms in their futures, but very few communities plan for farmers or farmland. Lee County is in a position, as it moves forward, to develop strategies to continue to protect farmland and promote smart growth and in so doing ensuring the fiscal strength and stability of the county.

Profile of Lee County

North Carolina's Lee County was named for Robert E. Lee and was created in 1907 from parts of Moore and Chatham counties. Lee County is located in North Carolina's Piedmont region which is located in the central part of the state. Lee County is comprised of 254.96 square miles, and borders Chatham, Harnett and Moore counties¹³. The 2010 census reported Lee County's population as 57,853, 2016 estimates showed that the population rose to 59,616¹⁴. According to the NC Department of Commerce 57.2% of Lee County's population is considered urban¹⁵.

EDUCATION

Lee County is home to Central Carolina Community College (CCCC), Lee County Schools and other Christian and college preparatory schools. Lee County Schools includes 16 public schools across the county serving more than 10,000 students. An innovation of Lee County Schools is Lee Early College which is based on the campus of Central Carolina Community College. The goal of this early college is to help students reach college who often wouldn't be able to earn a degree otherwise¹⁶.

Central Carolina Community College prepares students to work in a variety of job duties tailored to the county. In addition to the Lee County main campus, CCCC also has a workforce innovation center, small business center, dental center and several other facilities.

¹³ Vocci, Robert Blair. 2006. <https://www.ncpedia.org/geography/lee>

¹⁴ US Census Bureau. <https://www.ncpedia.org/geography/lee>

¹⁵ Lee County, AccessNC.

<http://accessnc.nccommerce.com/DemoGraphicsReports/pdfs/countyProfile/NC/37105.pdf>

¹⁶ Lee Early College. <https://www.lee.k12.nc.us/domain/949>

According to the NC Department of Commerce, in 2015 31,547 Lee County residents had at least a high school education and almost 8,000 had at least a bachelor's degree¹⁷.

ECONOMY

The county's Economic Development webpage boasts businesses with a significant global footprint with sites in Lee County including Moen, Wyeth, Coty, Caterpillar as well as two companies that started in Lee County that have grown and are now successful global enterprises – Frontier Spinning and Static Control Components. It cites a qualified and available workforce, access to transportation and training opportunities paired with a great quality of life, convenience and close proximity to the Raleigh and the Research Triangle Park¹⁸.

The table below shows the largest employers in Lee County, NC. Several of those listed above are included in the top 10 in addition to Pilgrims Pride – a large chicken production and processing business is ranked as number 6 on the list.

¹⁷ Lee County, NC . <http://accessnc.nccommerce.com/DemoGraphicsReports/pdfs/countyProfile/NC/37105.pdf>

¹⁸ Lee County, NC Economic Development. <http://leecountync.gov/EconomicDevelopment>

Employer Profile		Lee County	2015 4th Quarter
Top 25 Employers			
Rank	Company	Industry	Employment Range
1	Lee County Schools	Education & Health Services	1000+
2	Coty Llc	Manufacturing	500-999
3	Static Control Components Inc	Manufacturing	500-999
4	Bellflex Staffing Network	Professional & Business Services	500-999
5	Caterpillar Inc	Manufacturing	500-999
6	Pilgrims Pride Corporation	Manufacturing	500-999
7	Amisub Of North Carolina Inc	Education & Health Services	500-999
8	Central Carolina Community College	Education & Health Services	500-999
9	Pentair Water Pool & Spa Inc	Manufacturing	500-999
10	County Of Lee	Public Administration	500-999
11	Frontier Spinning Mills Inc	Manufacturing	250-499
12	Tyson Mexican Original Inc	Manufacturing	250-499
13	Wal-Mart Associates Inc	Trade, Transportation, & Utilities	250-499
14	Liberty Healthcare Group Llc	Education & Health Services	250-499
15	Core-Mark	Trade, Transportation, & Utilities	250-499
16	City Of Sanford	Public Administration	250-499
17	Moen Incorporated	Manufacturing	250-499
18	Magnetli Marelli Usa Inc	Manufacturing	250-499
19	Food Lion	Trade, Transportation, & Utilities	250-499
20	Circle K Stores Inc	Trade, Transportation, & Utilities	250-499
21	Tenet Healthsystem Medical Inc	Professional & Business Services	100-249
22	Mcdonald's Restaurants Of Nc Inc	Leisure & Hospitality	100-249
23	Sanford Contractors Inc	Construction	100-249
24	Moore's Machine Co Of Sanford Inc	Manufacturing	100-249
25	G K N Automotive Components Inc.	Manufacturing	100-249

Figure 3: Lee County Employer Profile: Top 25 Employers.

NC Dept of Commerce. http://accessnc.nccommerce.com/EDIS/Reports/topEmployers/topEmp_37105.pdf

The Sanford Chamber of Commerce entices employers to consider Lee County in part to the vast opportunities to transport goods and services quickly and conveniently. Several highways make it easy to travel into and out of Lee County. US Highway 1 runs north and south from the Canadian border to Key West, US Highway 421 Bypass allows easy access to eastern North Carolina and the state's ports and as far north as Michigan, and NC Highway 87 allows convenient access to Fayetteville and Greensboro. All of these in addition to easy access to Interstates 40, 85 and 95 provide good highway transportation options for companies. In addition to close proximity to Fayetteville Regional Airport and Raleigh-Durham International Airport – Lee County has a regional executive jetport for quality and convenient corporate air transportation for widespread companies. Lee County also offers rail transportation from both CSX and Norfolk Southern. There is also a shortline railroad that connects the two national rails. The aforementioned ports of NC – Morehead City and

Wilmington as well as the Port of Norfolk, VA are all convenient from Lee County¹⁹.

According to the NC Department of Commerce, unemployment rates have fallen from 5.9% in 2016 to an estimated 4.4% in late 2017. In 2015 the household income for Lee County residents was just above \$55,000. Manufacturing employs more Lee County residents than any other industry with nearly one-third of the county's workers²⁰.

POPULATION

The median age of Lee County residents was 38 years in 2015. Of the estimated 59,418 residents in 2015 27.9% were ages 0-19, 6.3% were 20-24 years of age, 12.5 percent were ages 25-34, the 35-44 age bracket occupied 12.7 percent of residents, 13.6% were 45-54 years old, 55-64 year olds made up 12.3% and 14.6% were 65 and older²¹.

Figure 4 shows the distribution of the Lee County residents by race. Nearly 75% of residents identify as white. Just over 20% are black or African American. The other nearly 5% is divided among American Indian or Alaskan Native (1.3%), Asian (1.3%), Native Hawaiian and other Pacific Islander (0.2%) and 2.1% identify themselves as more than one race.

¹⁹ Sanford, NC Area Growth Alliance. http://growsanfordnc.com/regional_data/transportation

²⁰ Lee County, NC. AccessNC.

<http://accessnc.nccommerce.com/DemoGraphicsReports/pdfs/countyProfile/NC/37105.pdf>

²¹ NC Department of Commerce. AccessNC.

<http://accessnc.nccommerce.com/DemoGraphicsReports/pdfs/countyProfile/NC/37105.pdf>

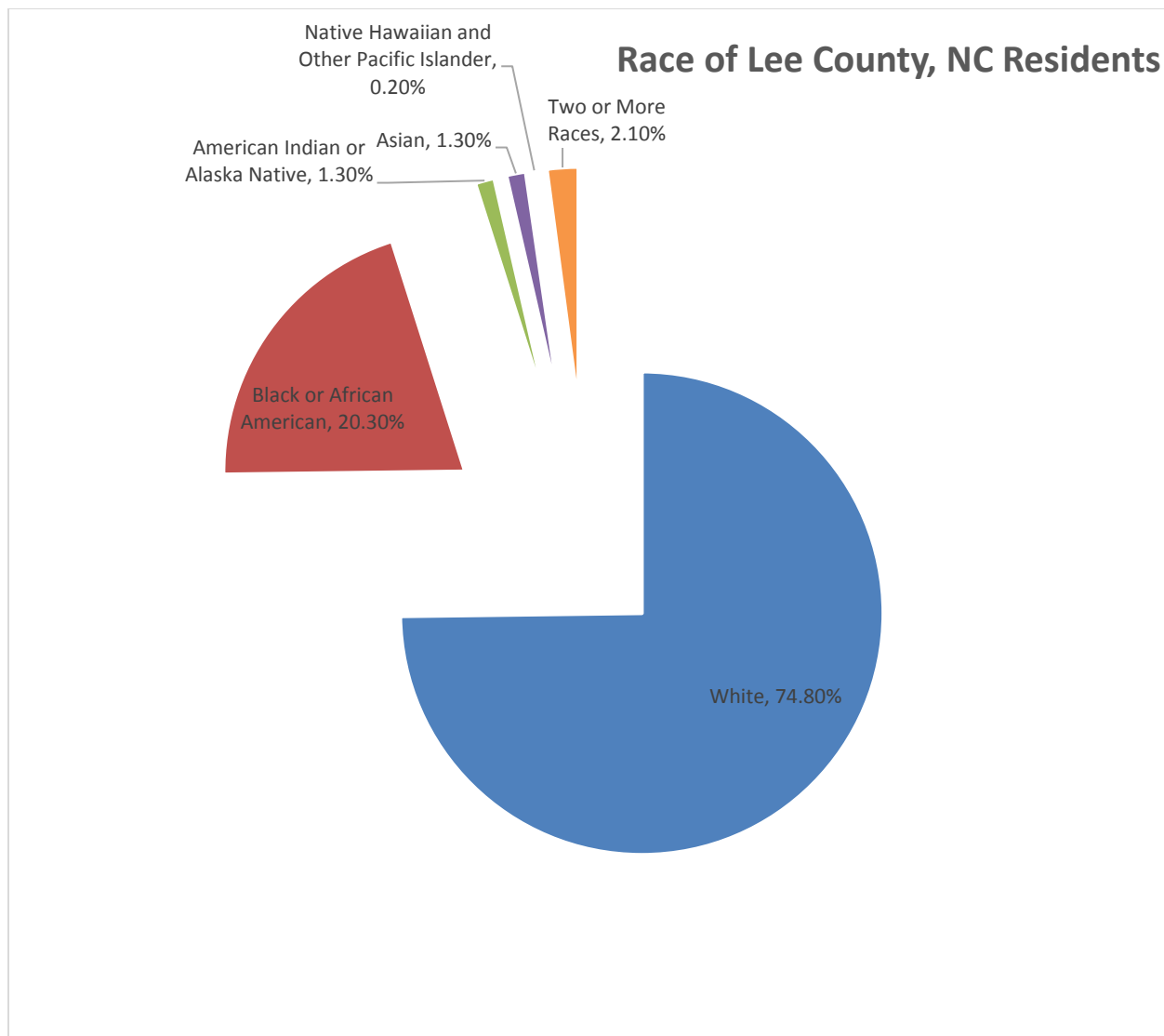


Figure 4: Lee County Population Demographics
NC Dept of Commerce.

<http://accessnc.nccommerce.com/DemoGraphicsReports/pdfs/countyProfile/NC/37105.pdf>

Lee County residents living arrangements are included in the table below from Lee County's website. According to the NC Department of Commerce 66.7%

of residents own their home while 33.3% rent their homes with a median gross rent of \$711 per month²².

HOUSING

Total Number of Housing Units as of 12-31-2016: 26,160

Single-Family Units	18,489
Apartment and Condominium Units	4,212
Single-wide Manufactured Homes	3,459
Median Contract Rent (2015)	\$ 711
Median Home Sale Price (2015)	\$ 136,900

Figure 5: Lee County Housing Units
Lee County Demographics. <http://leecountync.gov/WelcometoLeeCounty/Demographics>

TAXATION

Lee County is made up of two incorporated municipalities – the City of Sanford and Town of Broadway. The population demographics for each is shared below. The other nearly 30,000 residents of Lee County, by the Census figures used, live in the more than 217 square miles of rural unincorporated areas of the county.

POPULATION (2015 ACS US CENSUS DEPT)

²² NC Department of Commerce. ACCESSNC.
<http://accessnc.nccommerce.com/DemoGraphicsReports/pdfs/countyProfile/NC/37105.pdf>

City of Sanford	29,144
Town of Broadway	1,264
Lee County	59,660
North Carolina	10,146,788

Figure 6: Lee County Populations by Municipality
<http://leecountync.gov/WelcometoLeeCounty/Demographics>

GEOGRAPHY (AREA IN SQUARE MILES)

Sanford	28.15
ETJ Area	10.90
Broadway	1.85
Lee County	258.3

Figure 7: Lee County Geography by Municipality
<http://leecountync.gov/WelcometoLeeCounty/Demographics>

The county tax rate for the county for the year studied (2015-16) has remained 79.5 cents per \$100 of assessed property value. The municipal tax rates are listed below which are paid in addition to county taxes for municipal residents.

TAX (2016-2017 RATE PER \$100 OF ASSESSED VALUE)

Sanford	\$ 0.60
---------	---------

Broadway	\$ 0.49
County	\$ 0.79.5

(Sanford and Broadway residents pay both City and County taxes for real estate and personal property)

Figure 8: Lee County Tax Rates by Municipality
<http://leecountync.gov/WelcometoLeeCounty/Demographics>

While property taxes are an important revenue stream for the County, the continuation of deferred tax programs for agricultural lands is important as well. As noted, agricultural and forested lands contributed \$2,051,678.95 in property taxes to Lee County in 2015-16. This contribution was significant and was instrumental in concert with the taxes collected from commercial/industrial properties in offsetting the deficit between revenues and expenditures collected and spent respectively to provide services to residential property owners in Lee County.

In North Carolina, certain agricultural, horticultural and forested acres are taxed under a deferred tax program enacted by the NC General Assembly in 1974 designated as the Present Use Value Taxation Program. The importance of this program to the viability of agricultural and forested working lands and to the economic well-being of the county is apparent as a result of the COCS Study for Lee County.

The greatest asset a farmer or forest landowner has is their land. This deferred taxation program allows landowners that are

- *actively engaged in the commercial production or growing of crops, plants, or animals;*
- *actively engaged in the commercial production or growing of fruits, vegetables, nursery products, or floral products;*
- *actively engaged in the commercial growing of trees;*

to be considered for present-use value classification. In addition to these parameters, there are criteria related directly to ownership, property size, income, and management practices that ultimately determine whether property may be taxed based upon its present-use value or its market value. Generally stated, present-use value (PUV) is the value of land in its current use as agricultural land, horticultural land, or forestland, based solely on its ability to produce income and assuming an average level of management. This program allows landowners to continue to contribute to the local economy through taxation, but does not stifle the ability of the agricultural operation to remain profitable and continue to contribute to the County's economy through sales of market products and the need for and presence of allied industries to support these sales.

Properties that qualify for present-use value classification are assessed at their present-use value rather than its market value. Present-use value is usually less than market value and qualifying tracts are assessed at this lower value. The tax office establishes a market value for the land, and the difference between the market value and the present-use value is maintained in the tax assessment records as deferred taxes. When land becomes disqualified from the present-use value program, the deferred taxes for the current year and the three previous years with accrued interest will usually become due and payable²³.

Tax relief is an important issue for farmers. Farmers need land to operate and property taxes on farmland can be a significant expense. Taxes on farm buildings and other assets are often substantial as well. Legislation exists that supports the concept that taxes on agricultural land should be proportionate to its demand on community services and its ability to generate income. As demonstrated in multiple national and state County Cost of Community

²³ Baker, David B., Present-Use Value Program Guide, NC Department of Revenue, 1 Jan 2015
http://www.dornc.com/publications/puv_guide.pdf

Services (COCS) Studies, farmland provides more in property tax revenues than it requires in public services and by keeping farmland productive it serves to control the cost of community services.

Since overtaxed agricultural land may be more susceptible to conversion to non-agricultural uses, tax relief measures can also be considered a farmland protection tool. The expense of property taxes may discourage farmers from buying land and can force existing farmers to sell.

Farmers' savings from deferred property tax programs can be significant and may make the difference between staying in business and selling out. The retention and support of agriculture in Lee County is, as previously stated, essential to the economic stability and quality of life appreciated by Lee County residents.

Lee County Agriculture

According to the Lee County Working Lands Protection Plan completed by the University of Mount Olive in 2010, Agriculture and Agribusiness added \$280.5 million or 13.4% to the county's gross product. More than seventeen percent of jobs are directly tied to agriculture²⁴.

Agriculture in Lee County and across North Carolina has experienced change over the last few decades. The tobacco buyout, changes to the animal agriculture infrastructure, diversification of crops and cropping systems, options for alternative energy resources, and expansion and diversification of agribusiness opportunities in distribution and processing have all impacted agriculture. Agriculture has remained strong in Lee County.

Mike Walden, NC State University economist, reported that in 2014 agriculture and agribusiness, which include the food, fiber and forestry industries, accounted for one-sixth of the state's income and employees. Data compiled also indicated that 17%, or \$84 billion, of the \$482 billion gross state product is contributed by food, fiber and forestry industries. These industries account for 686,200 of the state's four million employees²⁵.

Lee County contributes to the strength of agriculture in the state. Agriculture is important to the economic stability of Lee County. Walden reported that in 2012 all agriculture and agribusiness contributed \$282,845,035.00 or 9.8% of the total county value-added income and was responsible for 9.8% of the county employment total. Agriculture, overall, is tied directly to 4,022 employees in Lee County which represents about 12.2% of the county's

²⁴ Caroselli, Kim and W. Stan Dixon. Lee County Working Lands Protection Plan. <http://umoag.com/outreach/docs/Lee%20County%20Working%20Lands%20Protection%20Plan%20Formatted.pdf>

²⁵ Mike Walden, Reynolds Distinguished Professor and Extension Economist, NC State's College of Agriculture and Life Sciences (2016) <https://ag-econ.ncsu.edu/wp-content/uploads/2016/05/agribusiness-2016.pdf>

employment. It may be noted that these figures vary only slightly from the figures reported in 2010 confirming that agriculture continues to have a significant impact on the economy of the county.

Statewide, Lee County ranked twenty-second in flue-cured tobacco production. The county ranked 65th in total cash receipts from agricultural production with nearly \$20 million from livestock, dairy and poultry receipts, more than \$15.3 million from crops²⁶.

In 2016, Lee County's ranking statewide was:

- 22nd in flue-cured tobacco (5,350,000 lbs.)
- 39th in broilers produced (4,000,000)
- 52nd in all cattle (3,800)
- 57th in beef cows (1,600)
- 63rd in soybeans (125,000 bu)
- 71st in wheat (24,200 bu)

Forestry is also a major component of Lee County's agricultural economy with 63% of the county's land in timberland. The forest industry economic impact for 2012 is reported in Figure 9.

Income From Timber Sales¹ :

Income Source	NC	Lee County
Forest stumpage (\$mill.)	\$ 391.5	\$2.6
Delivered forest products (\$mill.)	\$ 774.9	\$ 4.4

Forest Industry Economic Impact²

Total Impact	NC	Lee County
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²⁶ NC Agricultural Statistics. NCDA&CS. <http://www.ncagr.gov/stats/AgStat/Section06.pdf>

Output (\$mill.)	\$21,700	\$34.0
Labor income (\$mill.)	\$5,525	\$13.0
Employment	103,000	244

¹ Stumpage value is what the landowner receives for the sale of their standing timber. Delivered value is what is paid by the forest products industry upon delivery of the trees to the mill.

² Forest economic impact is based on total effects of all forest products and wood-based industry sectors

Figure 9: Lee County Forestry Impacts
<https://content.ces.ncsu.edu/lee-county>

Agricultural trends in Lee County are comparable to that across the state. Farm numbers have declined in Lee County: 311 in 1997; 304 in 2002; 272 in 2007; to 246 in 2012 while the average farm size continued to increase from 133 acres in 2007 to 159 in 2012²⁷. This is in keeping with other counties in NC witnessing a reduction in farms, but an increase in farm size. As agriculture shifts locally and statewide, the economics of scale begin to influence profitability as agricultural producers engage in meeting demand on a regional and global scale.

It is apparent that not only agricultural and forest product production is essential to the viability of Lee County's economy, but the agribusiness community and allied business communities are maintaining their presence within the county and diversifying. Though many of the businesses are not directly agricultural-related they provide services essential to agriculture.

The COCS provides an accurate depiction of Lee County revenue and also evaluates the expenditures of county resources provided for the different land uses identified. The goal of this study is to provide an additional resource for county leaders to use to understand not only the cost of resources expended

²⁷ USDA Census of Agriculture 1997-2012.
https://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_001_001.pdf

on each land use, but to continue to understand and support the agricultural industry in the respective counties and to North Carolina. This study makes a significant statement: It is financially wise to keep land in agricultural production. As a result, this effort may become an economic development focus for the County and others who are concerned about the sustainability of farmland within North Carolina. In addition to helping maintain fiscal balance, farmlands help sustain Lee County's economy, contribute to economic diversity and rural character, and help shape the overall quality of life in the region.

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Appendix: Supporting Tables

Table 1. Lee County Total Revenue for 2015-2016

Source	Revenue	Percentage
Taxes:		
Ad Valorem Tax	\$40,789,440.00	59.88%
Local Option Sales Tax	\$12,221,875.00	17.94%
Other taxes and licenses	\$500,552.00	0.74%
Unrestricted Intergovernmental	\$798,119.00	1.17%
Restricted Intergovernmental	\$10,153,600.00	14.91%
Permits and fees	\$350,004.00	0.51%
Sales and Services	\$2,790,962.00	4.1%
Investment earnings	\$91,540.00	0.13%
Miscellaneous	\$422,837.00	0.62%
Total	<u>\$68,118,929.00</u>	<u>100.00%</u>

Source: **General Fund- Schedule of Revenues, Expenditures and Changes in Fund Balances**,
Lee County, NC, Fiscal Year Ending, June 30, 2016

Table 2. Lee County Actual Expenditures for 2015-2016

Item	Expenditure	Percentage
General Government	\$8,844,246.00	13.13%
Public Safety	\$9,873,818.00	14.66%
Economic and Physical Development	\$1,166,079.00	1.73%
Human Services	\$15,087,385.00	22.4%
Education	\$21,372,559.00	31.73%
Cultural and Recreational	\$2,045,494.00	3.04%
Debt Service	\$8,971,890	13.31%
Total	<u>\$ 67,361,471.00</u>	<u>100.00%</u>

Source: **General Fund- Schedule of Revenues, Expenditures and Changes in Fund Balances,**
Lee County, NC, Fiscal Year Ending, June 30, 2016

Table 3. Revenue-to-Expenditures in Lee County 2015-2016

Revenue-to-Expenditure Ratios in Dollars			
	Residential	Commercial	Agricultural
Expenditures	\$56,273,370.25 (83.54%)	\$9,432,282.35 (14%)	\$1,655,818.40 (2.46%)
Revenue	\$42,602,584.20 (62.54%)	\$20,093,897.40 (29.5%)	\$5,422,447.40 (7.96%)
Revenue-to-Expenditure Ratio^a	1:1.32	1:0.47	1:0.31

^a This ratio measures the cost of services used by a given land sector for each dollar of county revenue contributed to that sector. The formula used is (Revenue/Revenue):(Expenditure/Revenue).

Tables 4A & B

Comparison of Revenue-to-Expenditures in Other Counties

Revenue-to-Expenditure Ratios from National Studies ^a			
	Residential	Commercial	Agricultural
Minimum	1:1.01	1:0.04	1:0.02
Median*	1:1.16	1:0.30	1:0.37
Maximum	1:2.27	1:1.04	1:2.04

*Median cost per dollar of revenue raised to provide public services to different land uses.

Revenue-to-Expenditure Ratios from Local NC Studies ^b			
	Residential	Commercial	Agricultural
Wake County (2001)	1:1.54	1:0.18	1:0.47
Union County (2006) ^c	1:1.30	1:0.41	1:0.24
Orange County (2006)	1:1.32	1:0.24	1:0.72
Alamance County (2006)	1:1.47	1:0.23	1:0.59
Chatham County (2007)	1:1.15	1:0.33	1:0.58
Henderson County (2008)	1:1.16	1:0.40	1:0.49
Gaston County (2008)	1:1.23	1:0.41	1:0.88
Franklin County (2009)	1:1.12	1:0.53	1:0.76
Durham County (2010)	1:1.15	1:0.33	1:0.59
Guilford County (2010)	1:1.35	1:0.29	1:0.62
Wayne County (2011) ^d	1:1.24	1:0.34	1:0.47
Yadkin County (2011)	1:1.18	1:0.38	1:0.61
Catawba County (2013)	1:1.23	1:0.54	1:0.75
Pitt County (2013)	1:1.29	1:0.36	1:0.62
Davie County (2014)	1:1.14	1:0.50	1:0.67
Iredell County (2015)	1:1.35	1:0.30	1:0.47
Craven County (2015) ^d	1:1.10	1:0.33	1:0.20
Pamlico County (2015) ^e	1:0.99	1:0.71	1:0.51
Duplin County (2016) ^f	1:1.14	1:0.30	1:0.41

^a These figures are derived from Cost of Community Services summarized on the American Farmland Trust website (http://www.communitypreservation.org/community_services.pdf).

^b Source: Renkow, Mitch. "Land Preservation Notebook." (<http://www.cals.ncsu.edu/wq/lpn/cost.html>)

^c Source: Dorfman, Jeffrey H. "The Fiscal Impacts of Land Uses on Local Government" Land Use Studies Initiative and Department of Agricultural & Applied Economics The University of Georgia, April 2006

^d Source: Best, Kathy. University of Mount Olive Cost of Community Services Study, Wayne (2011); Craven (2015)

^e Source: Olive, Edward F. University of Mount Olive Cost of Community Services Study, Pamlico (2015)

^f Source: Maddox, Sandy and Edward F. Olive. University of Mount Olive Cost of Community Services Study, Duplin (2016)

Table 5. Breakeven Analysis for Residential Property Value Lee County, NC 2015-2016

(1)	Property tax rate (cents per \$100 of property value)	79.5
(2)	Residential Non-Property Tax Revenue Contribution in FYE June 30, 2016 (omitting other financing sources)	\$ 18,128,920.20
(3)	Total residential expenditures in FYE June 30, 2016 (omitting other financing uses)	\$ 56,273,370.25
(4)	Total Expenditures needing to be paid for by property taxes [(3) – (2)]	\$ 38,144,450.05
(5)	Number of residential properties in the county	26,141
(6)	Per household expenditures needing to be paid for by property taxes [(4) ÷ (5)]	\$1,459
Breakeven property value [(6) ÷ (1)]		<u>\$ 183,522</u>

Table 6. Lee County Actual Revenues by Land Use Category for 2015-2016

Item	Total	Residential	Commercial/ Industrial	Agricultural/ Forestry	% Breakdown
Ad valorem taxes	\$40,789,440.00				
Taxes	\$40,545,301.00	\$24,327,180.60	\$14,190,855.35	\$2,027,265.05	60-35-5
Penalties and interest	\$244,139.00	\$146,483.40	\$85,448.65	\$12,206.95	60-35-5
Local option sales taxes	\$12,221,875.00				
Article 39 and 44	\$4,906,051.00	\$2,943,630.60	\$1,717,117.85	\$245,302.55	<i>default</i>
Article 40 one-half of one percent	\$2,821,986.00	\$1,693,191.60	\$987,695.10	\$141,099.30	<i>default</i>
Article 42 one-half of one percent	\$2,782,188.00	\$1,669,312.80	\$973,765.80	\$139,109.40	<i>default</i>
Article 46 one-quarter of one percent	\$1,711,650.00	\$1,026,990.00	\$599,077.50	\$85,582.50	<i>default</i>
Other taxes and licenses	\$500,552.00				
Deed stamp excise tax	\$215,651.00	\$129,390.60	\$75,477.85	\$10,782.55	<i>default</i>
Privilege licenses	\$2,994.00	\$0.00	\$2,994.00	\$0.00	0-100-0
Rental vehicle tax	\$76,112.00	\$45,667.20	\$26,639.20	\$3,805.60	<i>default</i>
Cable TV franchise tax	\$205,795.00	\$123,477.00	\$72,028.25	\$10,289.75	<i>default</i>
Unrestricted intergovernmental	\$798,119.00				
Beer and wine tax	\$63,180.00	\$47,385.00	\$0.00	\$15,795.00	75-0-25
Federal bond interest subsidy	\$734,939.00	\$440,963.40	\$257,228.65	\$36,746.95	<i>default</i>
Restricted intergovernmental	\$10,153,600.00				
Federal and state grants	\$9,429,649.00	\$7,072,236.75	\$0.00	\$2,357,412.25	75-0-25
Court facility fees	\$63,908.00	\$38,344.80	\$22,367.80	\$3,195.40	60-35-5
ABC bottles taxes	\$17,369.00	\$10,421.40	\$6,079.15	\$868.45	60-35-5
Public School Building Capital Fund-Lottery	\$642,674.00	\$482,005.50	\$0.00	\$160,668.50	75-0-25

*Default percentage: Residential (including historic) 60%; Commercial/Industrial 35%; Agriculture/Forestry 5%.

Table 6. Lee County Actual Revenues by Land Use Category for 2015-2016

Item	Total	Residential	Commercial/ Industrial	Agricultural/ Forestry	% Breakdown
Permits and fees	\$350,004.00				
Register of Deeds	\$350,004.00	\$210,002.40	\$122,501.40	\$17,500.20	<i>default</i>
Sales and services	\$2,790,962.00				
Rents, concessions, and fees	\$513,739.00	\$333,930.35	\$154,121.70	\$25,686.95	65-30-5
Jail fees	\$208,999.00	\$208,999.00	\$0.00	\$0.00	100-0-0
Vehicle tax collection fees	\$43,350.00	\$28,177.50	\$13,005.00	\$2,167.50	65-30-5
Health department fees	\$708,482.00	\$460,513.30	\$212,544.60	\$35,424.10	65-30-5
Other sales and services	\$1,316,392.00	\$855,654.80	\$394,917.60	\$65,819.60	65-30-5
Investment earnings	\$91,540.00	\$54,924.00	\$32,039.00	\$4,577.00	<i>default</i>
Miscellaneous	\$422,837.00	\$253,702.20	\$147,992.95	\$21,141.85	<i>default</i>
Total revenues	\$68,118,929.00	\$42,602,584.20	\$20,093,897.40	\$5,422,447.40	
		62.54%	29.50%	7.96%	

*Default percentage: Residential (including historic) 60%; Commercial/Industrial 35%; Agriculture/Forestry 5%.

Table 7. Lee County Actual Expenditures by Land Use Category for 2015-2016

Item	Total	Residential	Commercial/ Industrial	Agricultural/ Forestry	% Breakdown
General Government	\$8,844,246.00				
Governing body	\$157,720.00	\$94,632.00	\$55,202.00	\$7,886.00	default
Administration	\$607,281.00	\$364,368.60	\$212,548.35	\$30,364.05	default
Human resources	\$266,468.00	\$159,880.80	\$93,263.80	\$13,323.40	default
Finance	\$455,765.00	\$273,459.00	\$159,517.75	\$22,788.25	default
Internal Services	\$568,581.00	\$341,148.60	\$199,003.35	\$28,429.05	default
Tax appraisal	\$452,278.00	\$271,366.80	\$158,297.30	\$22,613.90	default
Tax collections	\$603,420.00	\$362,052.00	\$211,197.00	\$30,171.00	60-35-5
Tax listing	\$339,223.00	\$203,533.80	\$118,728.05	\$16,961.15	default
Strategic Services	\$408,084.00	\$244,850.40	\$142,829.40	\$20,404.20	default
Pretrial release	\$70,256.00	\$42,153.60	\$24,589.60	\$3,512.80	default
Court facilities	\$6,493.00	\$3,895.80	\$2,272.55	\$324.65	default
Elections	\$334,523.00	\$334,523.00	\$0.00	\$0.00	100-0-0
Register of deeds	\$302,135.00	\$181,281.00	\$105,747.25	\$15,106.75	default
Information technology	\$1,134,641.00	\$680,784.60	\$397,124.35	\$56,732.05	default
Information technology-PEG channel	\$14,904.00	\$8,942.40	\$5,216.40	\$745.20	default
Buildings and grounds	\$3,122,474.00	\$1,873,484.40	\$1,092,865.90	\$156,123.70	default
Public Safety	\$9,873,818.00				
Sheriff	\$4,509,395.00	\$2,705,637.00	\$1,578,288.25	\$225,469.75	default
Animal Control Enforcement	\$260,935.00	\$195,701.25	\$13,046.75	\$52,187.00	75-5-20
School Resource Officers	\$1,083,397.00	\$1,083,397.00	\$0.00	\$0.00	100-0-0
Communications	\$291,180.00	\$174,708.00	\$101,913.00	\$14,559.00	default
Jail	\$2,209,843.00	\$2,209,843.00	\$0.00	\$0.00	100-0-0
E911 Service	\$219,880.00	\$131,928.00	\$76,958.00	\$10,994.00	60-35-5
State fire control contribution	\$72,472.00	\$43,483.20	\$25,365.20	\$3,623.60	60-35-5

*Default percentage: Residential (including historic) 60%; Commercial/Industrial 35%; Agriculture/Forestry 5%.

Table 7. Lee County Actual Expenditures by Land Use Category for 2015-2016

Item	Total	Residential	Commercial/ Industrial	Agricultural/ Forestry	% Breakdown
Inspections	-\$167.00	-\$100.20	-\$58.45	-\$8.35	<i>default</i>
Medical examiner	\$49,850.00	\$49,850.00	\$0.00	\$0.00	100-0-0
Juvenile detention	\$84,180.00	\$84,180.00	\$0.00	\$0.00	100-0-0
Juvenile probation	\$5,725.00	\$5,725.00	\$0.00	\$0.00	100-0-0
Emergency medical services	\$551,250.00	\$330,750.00	\$192,937.50	\$27,562.50	60-35-5
Emergency services	\$243,579.00	\$146,147.40	\$85,252.65	\$12,178.95	60-35-5
Fire Marshall	\$292,299.00	\$175,379.40	\$102,304.65	\$14,614.95	60-35-5
Economic and physical development	\$1,166,079.00				
Economic development	\$405,330.00	\$0.00	\$364,797.00	\$40,533.00	0-90-10
Airport	\$80,462.00	\$0.00	\$80,462.00	\$0.00	0-100-0
Planning and zoning	\$418,412.00	\$271,967.80	\$125,523.60	\$20,920.60	65-30-5
Agricultural extension	\$151,991.00	\$15,199.10	\$0.00	\$136,791.90	10-0-90
Conservation	\$109,884.00	\$10,988.40	\$0.00	\$98,895.60	10-0-90
Human services	\$15,087,385.00				
Health					
Health	\$652,712.00	\$391,627.20	\$228,449.20	\$32,635.60	60-35-5
Maternal health	\$147,595.00	\$147,595.00	\$0.00	\$0.00	100-0-0
Child health	\$195,949.00	\$195,949.00	\$0.00	\$0.00	100-0-0
Primary care	\$87,810.00	\$83,419.50	\$4,390.50	\$0.00	95-5-0
Health promotion	\$119,224.00	\$119,224.00	\$0.00	\$0.00	100-0-0
WIC - Client services	\$232,578.00	\$232,578.00	\$0.00	\$0.00	100-0-0
Family planning	\$242,498.00	\$242,498.00	\$0.00	\$0.00	100-0-0
Animal control	\$201,213.00	\$201,213.00	\$0.00	\$0.00	100-0-0
Environmental health	\$413,958.00	\$248,374.80	\$144,885.30	\$20,697.90	60-35-5
AIDS control	\$39,796.00	\$39,796.00	\$0.00	\$0.00	100-0-0

*Default percentage: Residential (including historic) 60%; Commercial/Industrial 35%; Agriculture/Forestry 5%.

Table 7. Lee County Actual Expenditures by Land Use Category for 2015-2016

Item	Total	Residential	Commercial/ Industrial	Agricultural/ Forestry	% Breakdown
Bioterrorism	\$49,828.00	\$29,896.80	\$17,439.80	\$2,491.40	60-35-5
WIC - Breastfeeding	\$61,727.00	\$61,727.00	\$0.00	\$0.00	100-0-0
Child service coordinator	\$117,822.00	\$117,822.00	\$0.00	\$0.00	100-0-0
Communicable diseases	\$218,092.00	\$218,092.00	\$0.00	\$0.00	100-0-0
Breast/cervical cancer control	\$13,991.00	\$13,991.00	\$0.00	\$0.00	100-0-0
Immunizations	\$66,441.00	\$66,441.00	\$0.00	\$0.00	100-0-0
Ebola	\$2,231.00	\$2,231.00	\$0.00	\$0.00	100-0-0
Pregnancy Care Management	\$124,818.00	\$124,818.00	\$0.00	\$0.00	100-0-0
WIC - General administration	\$10,875.00	\$10,875.00	\$0.00	\$0.00	100-0-0
WIC - Nutrition education	\$29,329.00	\$29,329.00	\$0.00	\$0.00	100-0-0
Social Services					
Social Services - administration	\$6,300,403.00	\$6,300,403.00	\$0.00	\$0.00	100-0-0
Social Services - programs	\$3,326,929.00	\$3,326,929.00	\$0.00	\$0.00	100-0-0
Mental health	\$240,000.00	\$240,000.00	\$0.00	\$0.00	100-0-0
Human services nonprofits	\$34,500.00	\$34,500.00	\$0.00	\$0.00	100-0-0
Senior services - transportation	\$1,041,725.00	\$937,552.50	\$104,172.50	\$0.00	90-10-0
Senior services - general	\$933,292.00	\$933,292.00	\$0.00	\$0.00	100-0-0
Youth services	\$10.00	\$10.00	\$0.00	\$0.00	100-0-0
JCPC	\$182,039.00	\$182,039.00	\$0.00	\$0.00	100-0-0
Emergency and contingency	\$0.00	\$0.00	\$0.00	\$0.00	100-0-0
Education	\$21,372,559.00				
Lee County Board of Education	\$18,731,511.00	\$18,731,511.00	\$0.00	\$0.00	100-0-0
Central Carolina Community College	\$2,641,048.00	\$2,641,048.00	\$0.00	\$0.00	100-0-0

*Default percentage: Residential (including historic) 60%; Commercial/Industrial 35%; Agriculture/Forestry 5%.

Table 7. Lee County Actual Expenditures by Land Use Category for 2015-2016

Item	Total	Residential	Commercial/ Industrial	Agricultural/ Forestry	% Breakdown
Cultural and recreational	\$2,045,494.00				
Parks and recreation	\$1,351,807.00	\$1,216,626.30	\$67,590.35	\$67,590.35	90-5-5
Libraries	\$686,687.00	\$686,687.00	\$0.00	\$0.00	100-0-0
Cultural and recreational nonprofits	\$7,000.00	\$7,000.00	\$0.00	\$0.00	100-0-0
Debt service	\$8,971,890.00	\$5,383,134.00	\$3,140,161.50	\$448,594.50	60-35-5
Total Expenditures	\$67,361,471.00	\$56,273,370.25	\$9,432,282.35	\$1,655,818.40	
		83.54%	14.00%	2.46%	
Other financing sources	\$448,200.00				

*Default percentage: Residential (including historic) 60%; Commercial/Industrial 35%; Agriculture/Forestry 5%.